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Terms	Documents
l2 same L3	1

Database: US Patents Full-Text Database; US Pre-Grant Publication Full-Text Database; JPO Abstracts Database; EPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Search: L4

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DATE: Thursday, December 19, 2002 Printable Copy Create Case

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L4	l2 same L3	1	L4
L3	(nox) or (nadh oxidase)	31899	L3
L2	(age related) or (aging related) or (ageing related)	3220	L2
L1	ar nox or ar-nox	1	L1

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 NEWS  4  Apr 09   ZDB will be removed from STN
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 NEWS  6  Apr 22   Records from IP.com available in CAPLUS, HCAPLUS, and
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 NEWS  7  Apr 22   BIOSIS Gene Names now available in TOXCENTER
 NEWS  8  Apr 22   Federal Research in Progress (FEDRIP) now available
 NEWS  9  Jun 03   New e-mail delivery for search results now available
 NEWS 10  Jun 10   MEDLINE Reload
 NEWS 11  Jun 10   PCTFULL has been reloaded
 NEWS 12  Jul 02   FOREGE no longer contains STANDARDS file segment
 NEWS 13  Jul 22   USAN to be reloaded July 28, 2002;
                   saved answer sets no longer valid
 NEWS 14  Jul 29   Enhanced polymer searching in REGISTRY
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 NEWS 16  Aug 08   CANCERLIT reload
 NEWS 17  Aug 08   PHARMAMarketLetter(PHARMAML) - new on STN
 NEWS 18  Aug 08   NTIS has been reloaded and enhanced
 NEWS 19  Aug 19   Aquatic Toxicity Information Retrieval (AQUIRE)
                   now available on STN
 NEWS 20  Aug 19   IFIPAT, IFICDB, and IFIUDB have been reloaded
 NEWS 21  Aug 19   The MEDLINE file segment of TOXCENTER has been reloaded
 NEWS 22  Aug 26   Sequence searching in REGISTRY enhanced
 NEWS 23  Sep 03   JAPIO has been reloaded and enhanced
 NEWS 24  Sep 16   Experimental properties added to the REGISTRY file
 NEWS 25  Sep 16   Indexing added to some pre-1967 records in CA/CAPLUS
 NEWS 26  Sep 16   CA Section Thesaurus available in CAPLUS and CA
 NEWS 27  Oct 01   CASREACT Enriched with Reactions from 1907 to 1985
 NEWS 28  Oct 21   EVENTLINE has been reloaded
 NEWS 29  Oct 24   BEILSTEIN adds new search fields
 NEWS 30  Oct 24   Nutraceuticals International (NUTRACEUT) now available on
STN
 NEWS 31  Oct 25   MEDLINE SDI run of October 8, 2002
 NEWS 32  Nov 18   DKILIT has been renamed APOLLIT
 NEWS 33  Nov 25   More calculated properties added to REGISTRY
 NEWS 34  Dec 02   TIBKAT will be removed from STN
 NEWS 35  Dec 04   CSA files on STN
 NEWS 36  Dec 17   PCTFULL now covers WP/PCT Applications from 1978 to date
 NEWS 37  Dec 17   TOXCENTER enhanced with additional content
 NEWS 38  Dec 17   Adis Clinical Trials Insight now available on STN

 NEWS EXPRESS  October 14 CURRENT WINDOWS VERSION IS V6.01,
               CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
               AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
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DICTIONARY FILE UPDATES:  18 DEC 2002  HIGHEST RN 477178-10-2

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in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf

=> e ar nox/cn
E1            1     AR BINDER GS/CN
E2            1     AR FILM/CN
E3            0 --> AR NOX/CN
E4            1     AR RESIN AR 24/CN
E5            1     AR',AR'''-BI(BENZENESULFONANILIDE),
N,N'-BIS(3-METHYL-4-(TOL
                    YL)-2-BUTENYL)-/CN
E6            1     AR',AR'''-BI(BENZENESULFONANILIDE),
N,N'-BIS(3-METHYL-4-PHEN
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                    YL-2-BUTENYL)-/CN
E7            1     AR',AR'''-BICHALCONE/CN
E8            1     AR'-ACETOXYBIPHENYLCARBOXYLIC ACID/CN
E9            1     AR'-PHENOXYACETOPHENONE/CN
E10           1     AR,.ALPHA.-DIMETHYLSTYRENE-MALEIC ANHYDRIDE-STYRENE
POLYMER/
                    CN
E11           1     AR,1'-BI-1H-INDENE,
2',3'-DIHYDRO-2,2',2',3,4,4',7,7'-OCTAME
                    THYL-/CN
E12           1     AR,1'-BIPYRIDINIUM, CHLORIDE/CN

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COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                0.38       0.59

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FILE 'MEDLINE' ENTERED AT 12:22:03 ON 19 DEC 2002

=> s ar-nox or ar nox
L1            4 AR-NOX OR AR NOX

=> s (ar-nox) or (ar nox)
L2            4 (AR-NOX) OR (AR NOX)

=> d ibib abs

L2   ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:         2000:706975  CAPLUS
DOCUMENT NUMBER:          133:276372
TITLE:                    Methods for identifying agents that inhibit serum
                          aging factors (NADH oxidase) and uses and
compositions
                          thereof
INVENTOR(S):              Morre, Dorothy M.; Morre, D. James
PATENT ASSIGNEE(S):       Purdue Research Foundation, USA
SOURCE:                   PCT Int. Appl., 43 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
     WO 2000057871      A2   20001005       WO 2000-US8433   20000329
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WO 2000057871 A3 20020131
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: US 1999-126894P P 19990330
AB The invention described here relates to methods for prevention or treatment of disorders caused by oxidative damage resulting from generation of reactive oxygen species by an aging-specific isoform of NADH oxidase (**AR-NOX**). The invention encompasses methods of assaying, screening, and identifying agents that inhibit **AR-NOX**, as well as methods using ubiquinone to inhibit the ability of **AR-NOX** to generate reactive oxygen species. These agents may be formulated into pharmaceutical compns. in the prevention and treatment of disorders caused by oxidative damage, such as cancer, diabetes, parkinsonism, atherosclerosis, cardiotoxicity, nephrotoxicity, autoimmune diseases, etc.

=> d 2 ibib abs

L2 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:66687 CAPLUS
DOCUMENT NUMBER: 130:185169
TITLE: Shielding gases are the key to innovations in welding
AUTHOR(S): Irving, Bob
CORPORATE SOURCE: USA
SOURCE: Welding Journal (Miami) (1999), 78(1), 37-41
CODEN: WEJUA3; ISSN: 0043-2296
PUBLISHER: American Welding Society
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review with 2 refs. on the use of shielding gasses (CO2, **Ar**, **NOx**, He, H) for various welding processes.
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d 3 ibib abs

L2 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1978:65254 CAPLUS
DOCUMENT NUMBER: 88:65254
TITLE: Separation of radioactive noble gases in a nuclear fuel reprocessing plant
AUTHOR(S): Laser, M.
CORPORATE SOURCE: KFA, Juelich, Juelich, Fed. Rep. Ger.
SOURCE: Jahresbericht - Kernforschungsanlage Juelich (1977) 33-8
CODEN: KJNJAT; ISSN: 0341-8790
DOCUMENT TYPE: Journal
LANGUAGE: German

AB The CRYOSEP process is used when the effluent contains 85Kr, 129I, 3H, Xe,
O, N, **Ar**, **NOx**, and traces of other gases. Mist and
129I are removed by filters. H is added and NOx and O are catalytically converted to H2O and N. 3H is removed by intensive drying, and the gas stream contg. N, Ar, Xe, and 85Kr is liquefied. 85Kr is sepd. by distn. and stored in flasks under pressure. The AKUT process is used where the gases also contain CO and CO2 from the burning of coke. The gas is cleansed of dust and aerosol by an electrofilter. O is added to burn CO to CO2. The gas mixt., contg. 99% CO2, is compressed at room temp. and rectified. The 85Kr fraction is taken off the top. The CO2 fraction is free of 85Kr, but contains 3H and 129I, which are removed in an absorption
bed, after which CO2 is released to the atm. The 85Kr is compressed and stored. Heat generation is a problem in 85Kr storage; .apprx.240 W for a tank contg. 2000 Ci of 85Kr. Air-cooled 85Kr tanks are .apprx.50.degree. above the surroundings.

=> d 4 ibib abs

L2 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1976:64720 CAPLUS
DOCUMENT NUMBER: 84:64720
TITLE: Reduction of nitrogen oxides (NOx) in the waste gas from sinter plants
AUTHOR(S): Suzuki, Gyoichi; Ando, Ryo; Yoshikoshi, Hideyuki; Yamaoka, Yojiro; Nagaoka, Seishiro
CORPORATE SOURCE: Tech. Res. Cent., Nippon Kokan K. K., Kawasaki, Japan
SOURCE: Tetsu to Hagane (1975), 61(13), 2775-83
CODEN: TEHAA2; ISSN: 0021-1575
DOCUMENT TYPE: Journal
LANGUAGE: Japanese
AB The thermal NOx [11104-93-1] in waste gas formed in the sintering process was calcd. by a simulation model. The result showed that the amt. of thermal NOx in waste gas was .apprx.0.1% of that from the actual sintering
process. To check this result exptl., the sintering test was carried out exchanging the portion of N in air to **Ar**, **NOx** in waste
gas originated mainly from the N in coke. The N in ore was converted to NOx, however, the proportion of it was .apprx.10% of total N in the sinter
mixt., so that the dinitration of coke was necessary for the redn. of NOx from the sinter plant. For denitration of coke, the high temp. reheating of coke was used, and the ratio of denitration increased with rising temp.
For example, the N in coke decreased from 0.9 to .apprx.0.2% by reheating at 1830.degree. for 1 hr. In a sintering test using this low-N coke, the amt. of NOx formed could be diminished to .apprx.30%.

=> s age related or aging related or ageing related
L3 98226 AGE RELATED OR AGING RELATED OR AGEING RELATED

=> s (nadh oxidase) or (nox)
L4 59196 (NADH OXIDASE) OR (NOX)

=> s l3(s)l4
L5 25 L3(S) L4

=> dup rem l5
PROCESSING COMPLETED FOR L5
L6 14 DUP REM L5 (11 DUPLICATES REMOVED)

=> d ibib abs

L6 ANSWER 1 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:370233 BIOSIS
DOCUMENT NUMBER: PREV200200370233
TITLE: A superoxide-generating, **aging-related** cell surface **NADH oxidase** (**NOX** protein) expressed in MCF-10A mammary epithelia.
AUTHOR(S): Morre, Dorothy M. (1); Chueh, Pin-Ju; Morre, D. James
CORPORATE SOURCE: (1) Foods and Nutrition, Purdue University, 1264 State, West Lafayette, IN, 47907 USA
SOURCE: FASEB Journal, (March 22, 2002) Vol. 16, No. 5, pp. A996. http://www.fasebj.org/. print.
Meeting Info.: Annual Meeting of Professional Research Scientists on Experimental Biology New Orleans, Louisiana, USA April 20-24, 2002
ISSN: 0892-6638.
DOCUMENT TYPE: Conference
LANGUAGE: English
AB The protein belongs to a unique family of cell surface (plasma membrane)-associated hydroquinone (**NADH**) **oxidase** with protein disulfide-thiol interchange activity designated **NOX** proteins. One defining characteristics is a ca. 12-min alternation of the two activities (hydroquinone or NADH oxidation and protein disulfide-thiol interchange) to generate activity oscillations with a period length of ca. 24 min. A **NOX** protein of transfusion buffy coats and sera of aged individuals (70-100 y) generates superoxide with a period length of 25 min. The activity, measured by reduction of cytochrome c, is reduced or absent from sera of younger individuals (20-40 y). MCF-10A mammary epithelial cells normally lack this **aging-related** activity but the activity is induced and stably expressed in cells stressed by calcium phosphate transfection. The mammary cells induced to express the **aging-related NOX** protein provide a model whereby biochemical and phenotypic changes related to its expression can be assessed.

=> d 2 ibib abs

L6 ANSWER 2 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
ACCESSION NUMBER: 2001:229595 BIOSIS
DOCUMENT NUMBER: PREV200100229595
TITLE: Enhanced superoxide anion formation in vascular tissues from spontaneously hypertensive and desoxycorticosterone acetate-salt hypertensive rats.
AUTHOR(S): Wu, Rong; Millette, Esther; Wu, Lingyun; de Champlain, Jacques (1)
CORPORATE SOURCE: (1) Department of Physiology, Faculty of Medicine, University of Montreal, Succursale Centre-ville, Montreal, Quebec, H3C 3J7: grsna@ere.umontreal.ca Canada
SOURCE: Journal of Hypertension, (April, 2001) Vol. 19, No. 4, pp. 741-748. print.

ISSN: 0263-6352.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Objectives To investigate the basal and NADH-stimulated superoxide (cntdot O2-) production and inactivation by Cu/Zn superoxide dismutase (SOD) in aorta from spontaneously hypertensive rats (SHR) and from desoxycorticosterone acetate (DOCA)-salt hypertensive (DOCA-HT) rats. Methods Tissue cntdot O2- levels were estimated with the lucigenin-enhanced chemiluminescence method in aorta and cultured smooth muscle cells (SMCs) from SHR and in aorta from DOCA-HT rats treated for 4 weeks. Results The basal aortic cntdot O2- generation was increased by 135 and 100%, and the NADH stimulated cntdot O2- production was also increased 37 and 22% in SHR and in DOCA-HT rats compared to their normotensive controls, respectively. Although no difference existed in blood pressure as well as in basal and in NADH stimulated cntdot O2- production between Wistar-Kyoto (WKY) rats and SHR rats at age of 6 weeks, O2- production and blood pressure increased concomitantly in SHR aged 9 and 12 weeks. Basal and NADH-stimulated cntdot O2- production, in cultured SMCs, was also 80 and 64% higher, respectively, in SHR compared to WKY rats. The **NADH oxidase** activity was found to be increased in aorta from both SHR and DOCA-HT rats but SOD activity was reduced only in aorta from DOCA-HT rats. Conclusions An enhanced cntdot O2- formation resulting from an increased **NADH oxidase** activity was found in aorta from SHR and DOCA-HT rats. Cultured arterial SMCs from SHR also generated excessive cntdot O2- formation under basal and stimulated conditions. The **age-related** increase in vascular cntdot O2- formation in association with the rise in blood pressure in SHR suggests that the oxidative stress might contribute to the development of hypertension. **NADH oxidase** activity was greater in aorta of both hypertension models, but a decrease of Cu/Zn SOD activity could also contribute to the high level of aortic cntdot O2- in DOCA-HT rats.

=> d 3 ibib abs

L6 ANSWER 3 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:276685 BIOSIS
DOCUMENT NUMBER: PREV200100276685
TITLE: **Aging-related** cytochrome C reduction in sera of aged individuals is due to a superoxide-generating **NOX** protein.
AUTHOR(S): Claussen, Carrie (1); Guo, Fenghui (1); Morre, D. James (1); Morre, Dorothy M. (1)
CORPORATE SOURCE: (1) Purdue University, W. Lafayette, IN, 47907 USA
SOURCE: FASEB Journal, (March 7, 2001) Vol. 15, No. 4, pp. A277. print.
Meeting Info.: Annual Meeting of the Federation of American Societies for Experimental Biology on Experimental Biology 2001 Orlando, Florida, USA March 31-April 04, 2001
ISSN: 0892-6638.
DOCUMENT TYPE: Conference
LANGUAGE: English

SUMMARY LANGUAGE: English

AB Sera from aged individuals (80-100 y) uniquely reduce cytochrome c compared to sera from young individuals (20-40 y). **Aging-related** cytochrome c reduction (AR-CCR) is seen also with the cell surface of lymphocytes from aged individuals. Activity is inhibited by both superoxide dismutase (SOD) and coenzyme Q. The AR-CCR activity is resistant to heat and to proteinase K, properties of other **NOX** (**NADH oxidase**) proteins under investigation in our laboratories. The AR-CCR activity is correlated with band presence on Western blots using a peptide antibody to the conserved adenine nucleotide binding region of the **NOX** protein C terminus. The AR-CCR activity oscillates with a period length of 24 min as is characteristic of **NOX** proteins. The activity in serum is not due to pre-existing superoxides or to cytochrome c reduction by NADH-cytochrome c reductase. A mechanism to explain the **NOX**-associated AR-CCR will be presented.

=> d 4 ibib abs

L6 ANSWER 4 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:177753 BIOSIS
DOCUMENT NUMBER: PREV200200177753
TITLE: Spontaneous expression of an **aging-related NOX** isoform in cold-stored human lymphocytes (buffy coats.
AUTHOR(S): Morre, Dorothy M. (1); Huang, Roger (1); Carnahan, Brett (1); Wu, Lian-Ying (1); Layman, Sara; Morre, D. James
CORPORATE SOURCE: (1) Department of Foods and Nutrition, Purdue University, G-1E Stone Hall, West Lafayette, IN, 47907 USA
SOURCE: Molecular Biology of the Cell, (Nov, 2001) Vol. 12, No. Supplement, pp. 243a. http://www.molbiolcell.org/. print. Meeting Info.: 41st Annual Meeting of the American Society for Cell Biology Washington DC, USA December 08-12, 2001 ISSN: 1059-1524.
DOCUMENT TYPE: Conference
LANGUAGE: English

=> d 5 ibib abs

L6 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:706975 CAPLUS
DOCUMENT NUMBER: 133:276372
TITLE: Methods for identifying agents that inhibit serum aging factors (NADH oxidase) and uses and compositions thereof
INVENTOR(S): Morre, Dorothy M.; Morre, D. James
PATENT ASSIGNEE(S): Purdue Research Foundation, USA
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000057871	A2	20001005	WO 2000-US8433	20000329
WO 2000057871	A3	20020131		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1999-126894P P 19990330

AB The invention described here relates to methods for prevention or treatment of disorders caused by oxidative damage resulting from generation of reactive oxygen species by an aging-specific isoform of NADH oxidase (AR-NOX). The invention encompasses methods of assaying, screening, and identifying agents that inhibit AR-NOX, as well as methods using ubiquinone to inhibit the ability of AR-NOX to generate reactive oxygen species. These agents may be formulated into pharmaceutical compns. in the prevention and treatment of disorders caused by oxidative damage, such as cancer, diabetes, parkinsonism, atherosclerosis, cardiotoxicity, nephrotoxicity, autoimmune diseases, etc.

=> d 6 ibib abs

L6 ANSWER 6 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2

ACCESSION NUMBER: 2001:55274 BIOSIS
DOCUMENT NUMBER: PREV200100055274
TITLE: Age-related alterations of nitric oxide production in the brains of seizure-susceptible EL mice.
AUTHOR(S): Nagatomo, Itsugi (1); Akasaki, Yasuaki; Uchida, Masahiro; Tominaga, Masataka; Hashiguchi, Wataru; Kuchiiwa, Satoshi; Nakagawa, Shiro; Takigawa, Morikuni
CORPORATE SOURCE: (1) Department of Neuropsychiatry, Faculty of Medicine, Kagoshima University, 8-35-1, Sakuragaoka, Kagoshima, 890-8520: nagatomo@med4.kufm.kagoshima-u.ac.jp Japan
SOURCE: Brain Research Bulletin, (October, 2000) Vol. 53, No. 3, pp. 301-306. print.
ISSN: 0361-9230.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

AB We evaluated **age-related** changes in nitric oxide (NO) production in the brains of EL mice, a strain highly susceptible to seizures. A group of EL(s) mice were tossed up weekly to induce convulsive seizures, while in a nonstimulated EL(ns) group induction of convulsive seizures was avoided. Brain levels of nitrite plus nitrate (**NOx**) in EL(ns) mice were significantly higher than in nonstimulated mice at 10 days, and also higher than levels at 15 and 50 weeks in either EL(s) or EL(ns) mice. A significantly higher number of NO-producing cells were demonstrated in the hippocampus and parietal cortex by staining for nicotinamide adenine dinucleotide phosphate (NADPH)-diaphorase in EL(s) mice at the ages of 15 and 50 weeks than in EL(ns) mice at the age of 6 weeks. In EL(ns) mice, significantly fewer neurons showed NADPH-diaphorase

staining in the hippocampus, striatum and parietal cortex at the age of 50
weeks than at 6 weeks. The present results suggest that whole-brain **NOx** levels in EL(ns) and EL(s) mice and numbers of NADPH-diaphorase-positive neurons in EL(ns) mice decreased with aging, while increasing of numbers of such neurons in EL(s) mice were assumed to develop in compensation for reduction in whole-brain **NOx** levels.

=> d 7 ibib abs

L6 ANSWER 7 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:76914 BIOSIS
DOCUMENT NUMBER: PREV200100076914
TITLE: Age related alterations in nitric oxide signaling following
stimulation of striatal NMDA receptors in F344 rat.
AUTHOR(S): Spangler, E. L. (1); Ingram, D. K.; Yu, S.; Kametani, H.
CORPORATE SOURCE: (1) NIA, Baltimore, MD USA
SOURCE: Society for Neuroscience Abstracts, (2000) Vol. 26, No. 1-2, pp. Abstract No.-194.9. print.
Meeting Info.: 30th Annual Meeting of the Society of Neuroscience New Orleans, LA, USA November 04-09, 2000 Society for Neuroscience
. ISSN: 0190-5295.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Striatal neuronal nitric oxide synthase (nNOS)has been observed to decline
with age in the F344 rat, as measured by NADPH staining (Kuo etal., 1997).
We report here on nitric oxide signaling in striatum, putatively as a retrograde messenger on the NMDA receptor, following infusion of N-methyl-D-aspartic acid (NMDA). In vivo microdialysis and a **NOx** analyzer (Eicom, Japan)were used to measure the oxidative by-products of NO metabolism, nitrite and nitrate, in F344 rats 3-4 and 24-25 mo old that
had cannulae bilaterally implanted into striatum (AP +0.7, ML 3.2, DV -4.5). At lower doses of NMDA stimulation (0.25,1.0 and 10 mM;n=5/group) no age differences emerged in either nitrite or nitrate measurements. In a
second study 3-4 and 24-25 mo old rats were stimulated with either 0.3 or 30 mM NMDA (n=6/group). No age differences emerged at 0.3 mM but nitrite and nitrate increased significantly following 30 mM NMDA in aged but not young rats. In another study following i.p injection of Nw-Nitro-L-Arginine (8 mg/kg) a decline below baseline in nitrite and nitrate was more pronounced in young than in aged rats, indicative of an **age-related** loss of nNOS in striatum that was previously observed in NADPH staining. Our results suggest that other NOS isoforms (i.e.,eNOS,iNOS) may be account for an **age-related** increase in striatal nitrite and nitrate observed following 30mM NMDA stimulation. **Age-related** changes in effectiveness of an NMDA redox site may also be involved.

=> d 8 ibib abs

L6 ANSWER 8 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 3

ACCESSION NUMBER: 1999:371862 BIOSIS
DOCUMENT NUMBER: PREV199900371862
TITLE: Amniotic fluid nitric oxide metabolites, cyclic guanosine 3',5' monophosphate and dimethylarginine in alloimmunized pregnancies.
AUTHOR(S): Egberts, Johannes (1); van den Bosch, Nel; Soederhuizen, Pim
CORPORATE SOURCE: (1) Department of Obstetrics and Gynecology, Leiden University Medical Center, Building 1 {a} Department of Obstetrics and Gynecology, Leiden University Medical Center, Building 1 Netherlands
SOURCE: European Journal of Obstetrics & Gynecology and Reproductive Biology, (Aug., 1999) Vol. 85, No. 2, pp. 209-214.
ISSN: 0301-2115.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Objective: To determine the relationship between gestational age or the Liley index (the severity of fetal hemolysis) and the amniotic fluid total nitrite (**NOx**), cyclic guanosine 3',5' monophosphate (cGMP) and dimethylarginine (DMA) concentrations. We hypothesized that the concentrations of these components change because of fetal growth or adaptation to fetal anemia. Study Design: Amniotic fluids (n=64) were obtained between 23 and 37 weeks from fifty-three patients at risk for alloimmunization. Amniotic fluids from the pregnancies with a Liley index=1 were considered as controls (n=17). Creatinine (C, muMol) was determined with the Jaffe reagent, nitrite (**NOx**, muMol) with the Griess reagent, cGMP (nMol) by an enzyme immunoassay and DMA (muMol) after HPLC. Multiple regression analysis was used for separating the effects of growth and the estimated degree of anemia. Results: The concentration of **NOx**, cGMP and DMA was not related to the Liley index or whether or not the fetuses needed blood transfusions. The concentrations of creatinine (C), **NOx** and cGMP increased during pregnancy (in weeks;W) (C=-69.2+6.28W; r2=0.532; P<0.0001, **NOx**=-17.6+ 1.29W; r2=0.106; P=0.01, cGMP=-20.9+1.05W; r2=0.414; P<0.0001). The DMA concentration (3.8+-0.8(SD) and the **NOx**/creatinine ratio (181+-110 mM/M) did not change with gestational age. The cGMP/creatinine ratios (muM/M) increased (cGMP/C=-41.8+4.31W; r2=0.134; P=0.007) whereas the DMA/creatinine ratio (mM/M) declined during pregnancy (DMA/C=73.1-1.34W; r2=0.278; P=0.0002). Consequently, the **NOx** /DMA and cGMP/DMA ratios increased (**NOx**/DMA=-6.96+0.43W; r2=0.105; P=0.02, cGMP/DMA=-5.9+0.29W; r2=0.391; P<0.0001). Conclusions: The concentrations in amniotic fluid of cGMP and **NOX**, but not of DMA increase during gestation. The cGMP/creatinine ratio increases also whereas that of DMA decreases. The changes in products of the NO-cGMP pathway are independent of mild to moderate fetal hemolysis and may result from fetal growth as well as from reduced inhibition of NO synthase by DMA. Gestational **age related** effects should be taken into account when analyzing nitric oxide metabolites in amniotic fluids.

=> d 9 ibib abs

L6 ANSWER 9 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 4
ACCESSION NUMBER: 1999:341730 BIOSIS

DOCUMENT NUMBER: PREV199900341730
TITLE: A multifunctional hydroquinone oxidase of the external cell surface and sera.
AUTHOR(S): Morre, D. James (1); Pogue, Rhea; Morre, Dorothy M.
CORPORATE SOURCE: (1) Department of Medicinal Chemistry and Molecular Pharmacology, Purdue University, 1333 Hansen Life Sciences Research Building, West Lafayette, IN, 47907-1333 USA
SOURCE: Biofactors, (1999) Vol. 9, No. 2-4, pp. 179-187. ISSN: 0951-6433.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB A multifunctional cell surface protein with **NADH oxidase** (**NOX**) activity and capable of oxidizing hydroquinones is located at the exterior of the cell and is shed in soluble form into sera. The oxidase appears to function as a terminal oxidase of a trans plasma membrane electron transport chain consisting of a NAD(P)H-ubiquinone reductase at the cytosolic membrane surface, possibly a b-type cytochrome, ubiquinone and the oxidase. Hyperactivity or conditions that interrupt ordered 2H+ + 2e- transport from NAD(P)H or hydroquinone to molecular oxygen and other acceptors at the external cell surface may result in the generation of superoxide. The latter may serve to propagate **aging -related** redox changes both to adjacent cells and circulating blood components. A circulating **NOX** activity form associated with aging and the reduction of cytochrome c by sera of aged patients that is partially inhibited by ubiquinone are described.

=> d 10 ibib abs

L6 ANSWER 10 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2000:27695 BIOSIS
DOCUMENT NUMBER: PREV200000027695
TITLE: An **aging-related NOX** protein.
AUTHOR(S): Guo, Fenghui (1); Pogue, Rhea (1); Morre, D. James (1); Morre, Dorothy M. (1)
CORPORATE SOURCE: (1) Purdue University, West Lafayette, IN, 47907 USA
SOURCE: Molecular Biology of the Cell, (Nov., 1999) Vol. 10, No. SUPPL., pp. 59a.
Meeting Info.: 39th Annual Meeting of the American Society for Cell Biology Washington, D.C., USA December 11-15, 1999
The American Society for Cell Biology
. ISSN: 1059-1524.
DOCUMENT TYPE: Conference
LANGUAGE: English

=> d 11 ibib abs

L6 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:624037 CAPLUS
DOCUMENT NUMBER: 127:306212
TITLE: Mitochondrial complex I defects in aging
AUTHOR(S): Lenaz, Giorgio; Bovina, Carla; Castelluccio, Cinzia; Fato, Romana; Formiggini, Gabriella; Genova, Maria Luisa; Marchetti, Mario; Pich, Milena Merlo; Pallotti,

Francesco; Castelli, Giovanna Parenti; Biagini, Graziella
CORPORATE SOURCE: Dipartimento di Biochimica 'G. Moruzzi', University of Bologna, Bologna, Italy
SOURCE: Molecular and Cellular Biochemistry (1997), 174(1&2), 329-333
CODEN: MCBIB8; ISSN: 0300-8177
PUBLISHER: Kluwer
DOCUMENT TYPE: Journal
LANGUAGE: English

AB According to the 'mitochondrial theory of aging' it is expected that the activity of NADH Coenzyme Q reductase (Complex I) would be most severely affected among mitochondrial enzymes, since mitochondrial DNA encodes for 7 subunits of this enzyme. Being these subunits the site of binding of the acceptor substrate (Coenzyme Q) and of most inhibitors of the enzyme, it is also expected that subtle kinetic changes of quinone affinity and enzyme inhibition could develop in aging before an over-all loss of activity would be obsd. The overall activity of Complex I was decreased in several tissues from aged rats, nevertheless it was found that direct assay of Complex I using artificial quinone acceptors may underevaluate the enzyme activity. The most acceptable results could be obtained by applying the 'pool equation' to calc. Complex I activity from aerobic NADH oxidn.; using this method it was found that the decrease in Complex I activity in mitochondria from old animals was greater than the activity calcd. by direct assay of NADH Coenzyme Q reductase. A decrease of NADH oxidn. and its rotenone sensitivity was obsd. in nonsynaptic mitochondria, but not in synaptic 'light' and 'heavy' mitochondria of brain cortex from aged rats. In a study of Complex I activity in human platelet membranes the authors found that the enzyme activity was unchanged but the titer for half-inhibition by rotenone was significantly increased in aged individuals and proposed this change as a suitable biomarker of aging and age-related diseases.

=> d 11 kwic

L6 ANSWER 11 OF 14 CAPLUS COPYRIGHT 2002 ACS
IT 9032-21-7, **Nadh oxidase**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(NADH oxidn. in brain mitochondria in old and young rats in relation to complex I defects in **age-related** disease)

=> d 12 ibib abs

L6 ANSWER 12 OF 14 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.DUPLICATE 5
ACCESSION NUMBER: 94220918 EMBASE
DOCUMENT NUMBER: 1994220918
TITLE: L-arginine-nitric oxide pathway and chronic nephropathy in aged rats.
AUTHOR: Sonaka I.; Futami Y.; Maki T.
CORPORATE SOURCE: Central Research Laboratories, Ajinomoto Co., Inc., 214, Maeda-cho,Totsuka-ku, Yokohama 244, Japan

SOURCE: Journals of Gerontology, (1994) 49/4 (B157-B161).
ISSN: 0022-1422 CODEN: JOGEA3
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 005 General Pathology and Pathological Anatomy
020 Gerontology and Geriatrics
021 Developmental Biology and Teratology
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Effects of aging and dietary protein on the L-arginine-nitric oxide (Arg-NO) pathway and the progress of chronic nephropathy were examined. At 6-7 months of age, 10 male Fischer 344 rats were fed a 23% protein diet until 24 or 25 months of age, and another 10 were fed a 12% protein diet until that age. Twenty male Fischer 344 rats that were fed the 23% protein diet from 6 to 8 months of age were used as a control. Urinary excretion of nitrite/nitrate (**NOx**) at the age of 24 months in the 23% protein group was remarkably decreased, whereas in the 12% protein group, urinary **NOx** remained comparable to that of the control. Histological examination revealed that chronic nephropathy was highly progressive in the 23% protein group, accompanied by lowered renal function, but these changes were obviously suppressed in the 12% protein group. These results suggest that an **age- related** decrease in the synthesis of NO could be associated with the progress of chronic nephropathy.

=> d 13 ibib abs

L6 ANSWER 13 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC. DUPLICATE 6
ACCESSION NUMBER: 1989:454912 BIOSIS
DOCUMENT NUMBER: BA88:103184
TITLE: COMPARISON OF HIGH-DOSE OPIOID ANTAGONIST EFFECTS ON OVINE FETAL CARDIOVASCULAR FUNCTION.
AUTHOR(S): DUNLAP C E III; VALEGO N K; ROSE J C
CORPORATE SOURCE: DEP. PHYSIOL. PHARMACOL., BOWMAN GRAY SCH. MED., 300 S. HAWTHORNE ROAD, WINSTON-SALEM, N.C. 27103, USA.
SOURCE: DEV PHARMACOL THER, (1989) 13 (1), 28-37.
CODEN: DPTHDL. ISSN: 0379-8305.
FILE SEGMENT: BA; OLD
LANGUAGE: English

AB The opioid antagonists, naloxone (**NOX**) and naltrexone (NTX), were found to produce dose-dependent increases in fetal mean arterial pressure over a dose range of 5-80 mg/kg. There was a concomitant decrease in fetal heart rate up to 40 mg/kg. Above this dose, **NOX** and NTX caused an increase in heart rate as well as blood pressure. NTX produced similar effects in maternal ewes, although at lower doses (mg/kg) than those needed for fetal lambs. There were no **age-related** differences in antagonist effects in two fetal age groups studied (100-116 and 124-144 days of gestation). The partial antagonist, levallorphan (LVL), produced effects which were qualitatively similar to those produced by **NOX** and NTX in doses up to 20 mg/kg. These effects were not stereospecific, as the enantiomer of LVL, dextrallorphan, produced similar effects at equal doses. Pretreatment with the .alpha.1-adrenoreceptor antagonist, prazosin, abolished the opioid antagonist effects on fetal blood pressure. We postulate that high doses of opioid antagonists

activate sympathetic systems to increase fetal blood pressure through mechanisms which do not involve interactions with .mu., .delta. or .kappa.
opioid receptors.

=> d 14 ibib abs

L6 ANSWER 14 OF 14 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1979:201264 CAPLUS
DOCUMENT NUMBER: 90:201264
TITLE: Function of liver mitochondria of rats of different ages and characteristics of their degradation
AUTHOR(S): Almatov, K. T.; Rakhimov, M. M.
CORPORATE SOURCE: Res. Inst. District Med., Tashkent, USSR
SOURCE: Ontogenez (1979), 10(2), 182-8
CODEN: ONGZAC; ISSN: 0475-1450
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB For mitochondria isolated from the livers of 20-day- to 24-mo-old rats, there were no significant age-related differences in the rate of O uptake during succinate metab. in respiratory states 2, 3, and 4; the respiratory control ratio (RCR); or the ADP/O [(ADP phosphorylated)/(O taken up)] ratio under std. conditions. However, during continued incubation, the RCR and ADP/O ratios decreased more rapidly with 20-day-old rat and esp. 24-mo-old rat mitochondria than with the 3-mo-old rat mitochondria. During incubation at 36.degree., the decrease in the mitochondrial succinate oxidase (I), **NADH oxidase** (II), and cytochrome c oxidase activities followed a similar **age-related** pattern. These enzyme activities were also most sensitive to trypsin or phospholipase D treatment in the 24-mo-old rat mitochondria and least sensitive in the 3-mo-old rat organelles. The stimulation of mitochondrial I and II activities by exogenous cytochrome c was greatest for 20-day-old rats; intermediate for 1-, 16-, and 24-mo-old rats; and lowest for 3-mo-old rats. Evidently, the inner mitochondrial membrane is most stable in nonsenescent adult rats.

=> log y

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